

NAME _____
BIOLOGY

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Superhero Mutations

ThinkSheet #1



We have been lucky enough to get samples of DNA from 10 superheroes/villians before and after the superheroes got their powers!

Find and circle the difference in the before and after DNA for each. Write the type of gene mutation.

Hint: Count up the nucleotides (the number might change)

- 1.) **Spiderman:** Peter Parker is bit by a radioactive spider and turns into Spiderman.

Before: TACGTGGGGTGTTCCTACT

After: TACGTGGCGTGTTCCTACT

- 2.) **Daredevil:** Matt Murdock is blinded by a radioactive substance that fell from a vehicle and became Daredevil.

Before: TACCTGAGGCCCCGTACT

After: TACCTGGGCCCCGTACT

- 3.) **Hulk:** Dr. Bruce Banner is accidentally exposed to the blast gamma ray from a bomb he invented and becomes the incredible Hulk.

Before: TACAAAGTTTGTACGATC

After: TACATAAGTTTGTACGATC

- 4.) **The Fantastic Four: Mr. Fantastic** were exposed to cosmic rays during a scientific mission to outer space;

Before: TACCGGATATTGTTCCTACT

After: TACCGGTATTGTTCCTACT

- 5.) **The Fantastic Four: Invisible Woman:** Susan Storm (Reed's wife) can make herself and others invisible and project powerful force fields.

Before: TACTTTCCTACCCGATC

After: TACTTTCCTACCCGATC

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- 6.) **The Fantastic Four: Human Torch:** Johnny Storm (Sue's younger brother) can generate flames, surround himself with them and fly.

Before: TACTCGGCTAAACGAATT

After: TACTCGGCTAAAGGAATT _____

- 7.) **The Fantastic Four: Thing:** Ben Grimm (Sue, Reed, and Johnny's grumpy friend) has superhuman strength and endurance because of his organic stone flesh.

Before: TACCTTGTTGGTGGCACT

After: TACCTTGTTGGCACT _____

- 8.) **Poison Ivy:** Pamela Lillian Isley is infused with the plant chemicals and becomes Poison Ivy.

Before: TACCAGCCCATAAGGATC

After: TACCAGCCCATTAAAGGATTC _____

- 9.) **Danny Phantom:** Danny Fenton received his ghost powers through an accident with his parents' ghost portal.

Before: TACACCGAGAAGTAGATT

After: TACACCGAGATGTAGATT _____

- 10.) **Colossal Boy:** Gim Allon was mutated by a radioactive meteorite giving him super powers.

Before: TACGTGGGGTATGCTATC

After: TACGTGGGGTATGCTTCATC _____